

Sawtooth National Recreation Area



Junior Snow Ranger Book



Welcome to the Sawtooth National Recreation Area (SNRA). We are part of the Sawtooth National Forest and the United States Forest Service. Winter is a great time to explore all the recreation activities that the SNRA has to offer. You can discover what animals are adapted to live in this environment. In this booklet you will find the activities to complete to become a **Junior Snow Ranger**. Bring your completed book back to the SNRA Visitor Center to earn a patch and a certificate. It is a big responsibility to become a **Junior Snow Ranger** but we know you're up to the task! If you are winter ready you will have fun in the snow, and winter is the best time to look for animal tracks!



Want to become a Junior Snow Ranger?

Complete the number of activities for your age group.

If you are 5 complete 5 and if you are 10 complete them all!

How to Prepare for Winter

You're all ready to ski or snowshoe. It is important to check the weather and snow/avalanche conditions before you go out. Make sure you know how to navigate, signal for help and even stay out overnight.



Help us figure out which items to put in your bag. What are the 10 essentials?



Emergency blanket



Sandals



Electronics



Warm Clothes



Snorkel



Fire Starter



Extra Clothes



Food



Sun Protection



Head lamp



Waterbottle



Snacks



Map & Compass



Whistle & Signaling

What Do Animals Do in the Winter?

Some animals **MIGRATE**---they move to lower elevations where it's warmer. For example, many birds fly south for the winter.

Some animals **HIBERNATE**---they find a safe place to live underground, in a cave, under mud or dirt, or in a cluster of bushes. They lower their body temperature and they don't eat or go to the bathroom or come out of their home until spring comes.

Most animals in Idaho **STAY** and are active in winter. They need a warm winter coat, shelter, and different ways to find food.

What you think each animal below does in the winter?

Directions: Write the letter next to the animal M=Migrate H=Hibernate S=Stay

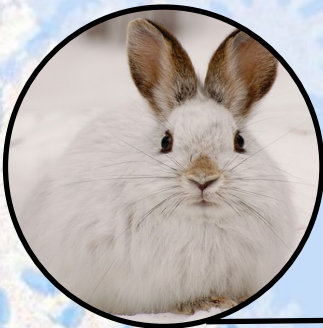
Black Bear



Red Fox



Snowshoe Hare

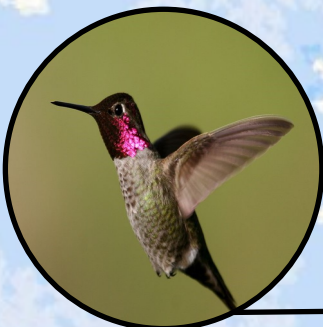


Garter Snake



Did you know? Snakes crawl into the ground and gather to form a **Hibernaculum**. Together they can stay warm in the winter since they are cold-blooded.

Hummingbird



Deer Mouse



I live in the **Subnivean zone** where I'm nice and warm.

Winter Wildlife Adaptations

What is an **adaptation**? It's a way that an animal changes to survive. It might begin to hunt during the day instead of at night like the wolf. It might use camouflage by changing its coat to white like the weasel. It might have specialized body parts like the wolverine. It might find a safer place to live like the deer mouse. Most animals that stay thrive in winter.

Directions: *Draw a line to match the winter animal with its adaptation.*

Snowshoes



Slinky



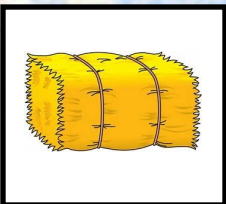
Basket of Pine
Cones



Wolverine
Cartoon



Haybale



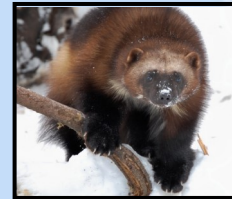
Tunnels



Ermine



Pika



Wolverine



Squirrel



Deer Mouse



Snowshoe Hare

History of Galena

Directions: Use the words from the Word Bank to fill in the blanks about the history of Galena.

Word Bank:

Galena	Paleo-Indians	mountain sheep	1972
Fur Traders	Miners	Beaver	
Post office	boom or bust	Sawtooth Wilderness	
Gold	Sawtooth National Recreation Area	2015	

People have been coming to _____ for thousands of years. About 10,000 years ago the _____ people lived in the Redfish Rock shelter. They hunted, fished and gathered food.

By 1700 AD the Northern Shoshone people lived here. They were called "sheep eaters" by explorers and trappers because they hunted _____.

In 1824 Alexander Ross from the Hudson Bay Company brought other _____ to trap _____ for their fur.

By the 1860's _____ came by the thousands to strike it rich in Idaho searching for _____ or silver.

Galena was a boom town by 1879 with 800 residents and extras like a restaurant, a _____, hotels, stables, general stores, a meat market, and deli.

With mining it was _____, and the search for silver was over by the 1890's and tourism became the next boom in this area.

The Sawtooth Forest Reserve was created in 1905 and the _____ and the _____ was created in _____.

The Hemmingway-Boulders and Cecil-D Andrus White Clouds were created in _____. Today visitors can come and enjoy all the recreation the SNRA has to offer!

Winter Wildlife Tracking

Who was here? Animal tracks show us what animals were here and what they are busy doing in the winter time. Think about how animals are moving on the snow: Are they walking like a moose, fox, coyote or wolf? Are they hopping like a snowshoe hare, squirrel or even a mouse? Are they loping like a slinky as the animals in the weasel family do including ermine, pine martin, wolverine and otter?

Directions: Find an area where there is snow in your backyard, public lands, or come to the Sawtooth National Recreation Area. Use the checklist below to identify the tracks that you see and mark which ones you find.

Winter Tracking Checklist



Snowshoe Hare



Deer Mouse



Ermine



Fox















Moose



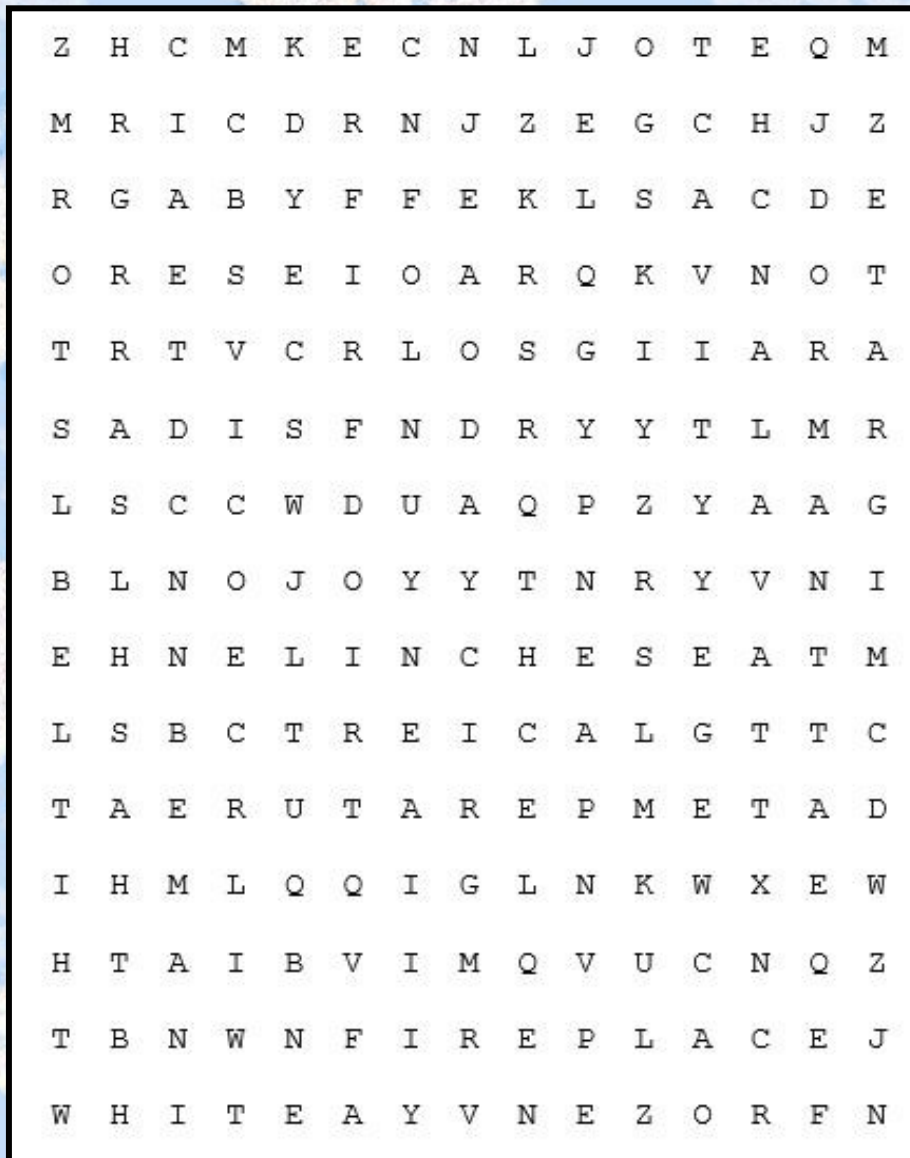
Winter Scavenger Hunt

Winter is a great time to go exploring! Wherever you are you can find signs of nature all around you. Use your five senses to ***listen*** for birds or squirrels, ***feel*** the bark of the tree to feel it's texture, ***look*** for animal tracks in the snow, ***taste*** your yummy snacks (not the snow), and ***smell*** the pine needles you rub between your fingers. Have fun!

Directions: *Cross off each item you find.*

			
Pine Cone	Twig	Flying Birds	Animal Tracks
			
Dead Leaves	Bird Nest or hole in tree	Squirrel or sign	Pine Needles
			
Ice or snowflake	Water dripping	Tree Sap	Insects or signs of them

Winter Word Search



Directions: Find each word in the puzzle and circle it. It might be backwards or upside down!

ANIMAL	AVALANCHE	CAVITY
CLOUDS	CRYSTAL	DEN
DORMANT	ENERGY	FIREPLACE
FROZEN	GLACIER	HIBERNATE
ICICLE	INCHES	MIGRATE
MITTENS	SKI	SNOWFLAKE
STORM	TEMPERATURE	THAW
TRACK	WATERPROOF	WHITE

The Science of Snow



**Sawtooth
Avalanche
Center**



The Sawtooth Avalanche Center has a highly trained team of Avalanche Forecasters who dig snow pits, look at the weather conditions, recent avalanches, and current conditions to create a daily forecast. Junior Snow Rangers can dig a snow pit to look at the snow layers.

Snowpack is important. When your out recreating, know what the avalanche danger may be for the day. It also is important to know how much snow water equivalent there is, how much water is in the snow, to determine how much runoff there will be in the spring. Water is an important resource for all living things and for both towns and farms that use the water as well.



If you plan to be in the back-country skiing, snowboarding, snowmobiling, etc. Check the avalanche report and weather. Make sure to bring and know how to use an avalanche beacon, shovel and probe.



Directions: *Dig a snow pit or find a vertical cut in the snowpack. Analyze and record the data on the chart. Follow the steps below to dig your snow pit:*

1. Dig snowpit all the way to the ground in an area without a snow drift
2. Flatten the back of the snowpit with a card
3. Use your fist or fingers to slowly push into the snow pit to find the different layers
4. Put in a popsicle stick at each different layer
5. Once all the layers have been identified, write down your observations of each of the layers and look at the snowflakes (is it fluffy, ice crystals or compacted, can you see the flakes or is it more like pieces of ice) etc.
6. Look for other signs of animals under or on top of the snow. Why do you think animals live under the snow in the subnivean layer? What is different about that layer?



Types of Snowflakes ... SnowCrystals.com

<u>Snow-pack</u>	Measurement of Layer in inches or cm	Temperature of Layer (F or C)	Description of each layer (hard, soft, granular, flaky, crusty, fluffy, etc.)	Type of snowflake in this layer (see chart)
Layer 1				
Layer 2				
Layer 3				
Layer 4				
Layer 5				
Total Depth		Overall Observations of snowpack:		



Winter is FUN!!!

WOW! There are so many activities you can do outside in the winter! Build a snow cave to see if you could survive if you were trapped outside overnight. Dig a snow pit to look at the snow crystals and layers of snow. Look for animal tracks. Go snowshoeing, skiing, snowmobiling or just play in the snow by sledding or snowball fighting! Share a warm cup of hot cocoa after a fun day with family and friends out in the snow!

I know the Sawtooth Education Team sure have had a blast this winter snowshoeing with students, digging snow pits, and looking for animal tracks! But we want to hear about your adventures! Draw a picture or write about one of your favorite winter activities you did this winter.

Directions: Tell us about your fun winter adventures! Draw a picture or write about one of your favorite winter activities you did this winter.



You're almost there! Take your book to a Parent or Ranger and have them recite the pledge with you after they check that you have completed the necessary pages in the book. To receive your own Junior Snow Ranger Patch cut along the dotted line and mail the upper part of this page to the address below. The certificate at the bottom of this page and your book are for you to keep. Thank you for becoming a Junior Snow Ranger and helping care for our National Forest lands.



**Junior Snow Ranger
USDA Forest Service
National Symbols Cache
402 SE 11th Street
Grand Rapids, MN 55744-3955**



Congratulations! You're a Junior Snow Ranger!



Pledge

***As a Junior Snow Ranger,
I promise to learn about the winter in the
Sawtooth National Recreation Area
and to enjoy all the fun winter has to offer
while respecting plants and animals in this winter environment.***

Junior Snow Ranger _____

Parent/Ranger Signature _____

Name: _____

Address: _____

Place

Stamp

Here

Junior Snow Ranger

USDA Forest Service

National Symbols Cache

402 SE 11th Street

Grand Rapids, MN 55744-3955

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